Porting to 64 bit: A Production Overview

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The 64-bit Decision

- Vision
  - Value: Technology Leadership, Early Experience
  - Performance: Nice bonus
- Evaluation
  - Hardware: Beta
  - Software: Most were beta, a couple were not ready
  - Codebase: Required more porting than other games
  - Resources: Were available
  - Time: Was reasonable

Fast Facts

- Product: Far Cry
- Start Date: Aug 2003
- End Date: Apr 2004
- Team Size
  - 2 Programmers
  - 2 Testers
  - 1 Project manager
- Cost: ~325 staff days

- Total lines of code: ~800,000
- Lines of code changed or added: ~16,000 (2%)
- Performance Improvement: up to 25%

Challenges in the Past

- Hardware – Beta
- Operating System – Beta
- Dev Environment – Beta
- DirectX – Beta
- Drivers – Beta
- Third party software
  - Sound: FMod – Not 64 bit compliant
  - Video: Bink – Not 64 bit compliant

Solutions of the Past

- Hardware – Upgraded to latest from AMD
- Operating System – Remained on 1069
- Dev Environment – Remained on beta
- DirectX – Upgraded to latest versions
- Drivers – Upgraded to latest versions
- Third party software
  - Sound: FMod – Developer ported it
  - Video: Bink – Replaced with Div/x

Recommendations

- Dual 32/64 bit development from the start
- Partner with AMD early
- One dedicated programmer
  - Primary porting
  - Technical contact with AMD and partners
  - Evangelize 64 bit thinking
- Port after 32 bit version is feature complete

Conclusion

- Develop PC games for multiple platforms
- Early benefits seen in content creation
- First commercial Windows XP 64 Bit game